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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/690,656	10/22/2003	Ahti Muhonen	042933/269768	5860
826 7590 05/28/2009 ALSTON & BIRD LLP BANK OF AMERICA PLAZA 101 SOUTH TRYON STREET, SUITE 4000 CHARLOTTE, NC 28280-4000			EXAMINER DAILEY, THOMAS J	
			ART UNIT 2452	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/690,656

Applicant(s)

MUHONEN ET AL.

Examiner

Thomas J. Dailey

Art Unit

2452

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 3/12/2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7, 9 and 11-39 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7, 9 and 11-39 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-8508)
Paper No(s)/Mail Date 1/5/2009
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Inventor's Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 3/12/2009 has been entered.
2. Claims 1-7, 9, and 11-39 are pending.

Response to Arguments

3. Applicant's arguments with respect to the prior art rejection of the claims have been considered but are moot in view of the new ground(s) of rejection.
4. However, the examiner notes in respect to apparatus claims 1-7, 9, and 11-18 that the claims recite an apparatus with a processor configured to perform a variety of steps.

According to the MPEP 2106(IV)(B), "[n]ote that an apparatus claim with process steps is not classified as a "hybrid" claim; instead, it is simply an apparatus claim including functional limitations."

Further, "[w]hile features of an apparatus may be recited either structurally or functionally, claims directed to an apparatus must be distinguished from the prior art in terms of structure rather than function" and "apparatus claims cover what a

device is, not what a device does." See MPEP 2114. See also MPEP 2111.04 ("Claim scope is not limited by claim language that suggests or makes optional but does not require steps to be performed, or by claim language that does not limit a claim to a particular structure").

Thus, because the claims are apparatus claims, those functional limitations may simply be ignored because they do not limit the apparatus to a particular structure. Every apparatus with a processor and memory has the ability to receive a status of content and send one or more instructions (e.g. claim 1). The claimed apparatus must be different structurally. Therefore, for the purposes of claim interpretation, the claims only recite an apparatus comprising a processor and memory.

It is strongly suggested the applicant reword these apparatus claims so as to recite structure and not function. The examiner further notes the claim language of the previously submitted claims (e.g. "a processor configured to receive...") contains the same issue as the only structure associated with the apparatus was still just the processor.

5. Further, the examiner has still maintained the Pecus/Deo combination (though applied to a different set of claims in this action) that the applicant has argued is improper. Specifically, the applicant alleges that there is no apparent reason to combine the teachings of Pecus (US Pat. 7,130,908) and Deo (US Pat. 6,157,982).

6. The examiner disagrees and notes, as stated in the previous action, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of Pecus and Deo in order to decrease the processing burden of a terminal that has less processing power available than a computer it is networked with (Deo, column 2, line 65-column 3, line 4). Further, it is well known that computer networks have a heterogeneous array of computers with varying processing powers, and thus by combining Deo and Pecus, Pecus's system would be better suited if the end node had less processing power than the NOC.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:
- (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.
8. Claims 1, 6, 7, 9, 11-13, 17-20, 24-29, 34-39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pecus et al (US Pat. 7,130,908), hereafter "Pecus," in view of Deo et al (US Pat. 6,157,982), hereafter "Deo."

9. As to claim 12, Pecus discloses an apparatus comprising a processor and memory storing executable instructions that in response to execution by the processor cause the apparatus to at least perform the following:

sending, to another apparatus located remote from the apparatus, a status of at least one piece of content stored in memory of the apparatus (column 22, lines 37-59, edge node (apparatus) responds to requests from NOC (other apparatus) with information related to the status of content stored at the edge node), each piece of content being associated with parameters including a client expiration time and a deletion priority value (column 17, lines 35-41, files stored on the edge node have expiration times and deletion indications (deletion priority value)),

receiving one or more instructions from the other apparatus based upon the status and the associated parameters to at least partially control storage of the at least one piece of content in memory of the apparatus (column 16, lines 7-17, NOC (network entity) sends messages to the edge nodes (terminal) to delete files and data).

But, Pecus does not explicitly disclose the received instructions at the apparatus, located remotely from the other apparatus, are based upon the client expiration time and the deletion priority value. Rather, Pecus discloses these steps are carried out by the edge node (reading on the apparatus), not the NOC (reading on the other apparatus), see column 17, lines 15-28. However, Pecus

does disclose that the NOC is functionally capable of sending instructions to the edge node, including delete instructions (column 22, lines 30-38).

However, Deo discloses sending one or more instructions from a processor to a remote terminal based upon the status of the content stored in memory to at least partially control storage at least one piece of content in memory of the terminal, said instruction including determining available memory capacity of the terminal and if said memory does not have sufficient storage capacity deleting content (column 3, lines 8-24, a computer (apparatus) remotely issues memory transactions (instructions) to a information device (terminal), those instructions being based upon the content of the information device's memory, and the computer (apparatus) determines how much space is available as it has a map of the device memory in its own memory).

Thus, the combined teachings of Pecus and Deo would yield a system in which the memory management method of Pecus executed by the edge node (i.e. determining what entries are expired and which are marked for deletion) would be carried out by the NOC. Due to the fact, that Deo discloses a system in which a remote device memory transactions are controlled by another, separate device.

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of Pecus and Deo in order to decrease the processing burden of a terminal that has less processing power

available than a computer it is networked with (Deo, column 2, line 65-column 3, line 4).

10. As to claims 1, 19, 29, and 39, they are rejected by the same rationale set forth in claim 12's rejection.

11. As to claim 6, Pecus discloses the invention substantially with regard to the parent claim 1, and further discloses the apparatus configured to store at least one piece of content, wherein the parameters further include a server expiration time (column 17, lines 15-20), and wherein the memory stores executable instructions that in response to execution by the processor cause the apparatus to further perform sending at least one piece of content to the terminal (column 11, lines 40-50, NOC receives data and forwards it to the edge nodes).

12. As to claim 7, Pecus and Deo disclose the invention substantially with regard to the parent claim 6, and further disclose monitoring the server expiration time of the at least one piece of content in memory of the apparatus to determine when at least one piece of content has an exceeded server expiration time (Pecus, column 17, lines 15-28, expiration times may be relative to different clocks, e.g. system or network as recited on line 19-20), and when at least one piece of content has an exceeded server expiration time, deleting the at least one piece of content having an expired server expiration time (Pecus, column 17, lines 15-28).

13. As to claims 9, 11, 17, 26, and 36, Pecus discloses the processor is configured to associate each piece of content stored in the memory is associated with respective parameters (column 17, lines 20-28).
14. As to claims 13 and 20 Pecus discloses receiving one or more instructions comprises receiving one or more instructions to delete at least one piece of content based upon a comparison between the deletion priority value of each piece of content stored in memory (column 17, lines 11-14), to receive the one or more instructions being received when, based on a determination of when memory has sufficient storage capacity for at least one subsequent piece of content, the memory does not have sufficient storage capacity (column 17, lines 20-24, the data manager checks for files marked for forced deletion; i.e. a plurality of files' forced deletion flag is compared with the Boolean value "true" to determine if they should be deleted).
15. As to claims 18, 27, and 37, Pecus discloses the processor is configured set a deletion priority value for at least one piece of content (column 17, lines 20-28).
16. As to claims 24, Pecus discloses receiving at least one piece of content at the network entity; and sending at least one piece of content to the terminal such that

the terminal receives, and thereafter stores, the at least one piece of content (column 11, lines 40-50, NOC receives data and forwards it to the edge nodes).

17. As to claims 25, Pecus discloses the parameters further includes include a server expiration time (Pecus, column 17, lines 15-20), and wherein the method further comprises:

monitoring the server expiration time of the at least one piece of content in memory of the network entity to determine when at least one piece of content has an exceeded server expiration time (Pecus, column 17, lines 15-20); and

when at least one piece of content has an exceeded server expiration time, deleting the at least one piece of content having an expired server expiration time (Pecus, column 17, lines 15-20).

18. As to claims 28 and 38, Pecus discloses associating each piece of content comprises associating each piece of content stored in memory of the terminal with respective parameters at the network entity (column 17, lines 20-28).

19. As to claims 34, Pecus and Deo disclose the invention substantially with regard to the parent claim 30, and further disclose receiving at least one piece of content at the network entity; and sending at least one piece of content to the terminal such that the terminal receives, and thereafter stores, the at least one piece of

content (Pecus, column 11, lines 40-50, NOC receives data and forwards it to the edge nodes).

20. As to claim 35, it is rejected by a similar rationale to that set forth in claims 7's rejection.

21. Claims 2-5, 14-16, 21-23, and 30-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pecus in view of Deo in further view of Jerding et al (US Pub. No. 2005/0172326), hereafter "Jerding."

22. As to claims 2 and 30, Pecus and Deo disclose the invention substantially with regard to the parent claims 1 and 29, and Pecus further discloses determining when memory of the terminal has sufficient storage capacity for at least one subsequent piece of content (column 17, lines 11-14), and when memory does not have sufficient storage capacity deleting at least one piece of content based upon a comparison of the deletion priority values of a plurality of pieces of content stored in memory of the terminal (column 17, lines 20-24, the data manager checks for files marked for forced deletion; i.e. a plurality of files' forced deletion flag is compared with the Boolean value "true" to determine if they should be deleted).

But, Pecus fails to disclose that a processor, located remotely from the terminal, carrying out the determining and sending steps. Rather, Pecus

discloses these steps are carried out by the edge node (reading on the terminal), not the NOC (reading on the apparatus), see column 17, lines 1-10. However, Pecus does disclose that the NOC is functionally capable of sending instructions to the edge node, including delete instructions (column 22, lines 30-38).

However, Deo discloses sending one or more instructions from a processor to a remote terminal based upon the status of the content stored in memory to at least partially control storage at least one piece of content in memory of the terminal, said instruction including determining available memory capacity of the terminal and if said memory does not have sufficient storage capacity deleting content (column 3, lines 8-24, a computer (apparatus) remotely issues memory transactions (instructions) to a information device (terminal), those instructions being based upon the content of the information device's memory, and the computer (apparatus) determines how much space is available as it has a map of the device memory in its own memory).

Thus, the combined teachings of Pecus and Deo would yield a system in which the memory management method of Pecus executed by the edge node (i.e. determining what entries are expired and which are marked for deletion) would be carried out by the NOC. Due to the fact, that Deo discloses a system in which a remote device memory transactions are controlled by another, separate device.

But, neither Pecus nor Deo disclose the comparison *between* deletion priority values of pieces of content. Rather, Pecus discloses a comparing a marked for deletion flag with a Boolean value.

However, Jerding discloses a dynamic comparison between deletion priority values of a plurality of pieces of content stored in memory in order identify content that needs to be deleted in order to make room in memory for more content from a remote device ([0059]).

Because both Pecus and Jerding disclose methods of creating memory space for incoming data, it would have been obvious to one of ordinary skill in the art at the time of the invention substitute one method (i.e. Pecus's method, with forced deletion flags) for the other (i.e. Jerding's method, with dynamic comparisons of priority values of memory content) to achieve the predictable result of effectively creating memory space for incoming data (i.e. the end result both disclosures).

23. As to claim 3, Pecus, Deo, and Jerding disclose the invention substantially with regard to the parent claim 2, and further disclose determining a plurality of pieces of content having an exceeded client expiration time (Pecus, column 17, lines 15-20, "expired files" are identified), identifying a piece of content having a highest deletion priority value from a comparison between the deletion priority values (Jerding, [0059]) of the pieces of content having an exceeded client expiration time, the comparison excluding any piece of content without an exceeded client expiration time and sending one or more instructions instructing the terminal to

delete the identified piece of content (Pecus, column 17, lines 15-28, if files are both expired and have are marked for forced deletion, they will be deleted).

24. As to claim 4, Pecus, Deo, and Jerding disclose the invention substantially with regard to the parent claim 3, and further disclose the process is configured to repeatedly identify a piece of content, and send one or more instructions to instruct the terminal to delete the identified piece of content (Pecus, column 17, lines 15-28), until one of memory of the terminal has sufficient storage capacity for the at least one subsequent piece of content (Pecus, column 17, lines 15-28), or each piece of content having an exceeded client expiration time has been identified and deleted (Pecus, column 17, lines 15-28).

25. As to claim 5, Pecus, Deo, and Jerding disclose the invention substantially with regard to the parent claim 4, and further disclose when memory of the terminal does not have sufficient storage capacity for at least one subsequent piece of content and each piece of content having an exceeded client expiration time has been identified and deleted (Pecus, column 17, lines 15-28), the processor is further configured to identify at least one piece of content having a highest deletion priority value from a comparison between the deletion priority values of any pieces of content remaining in memory of the terminal (Jerding, [0059]), and send one or more instructions instructing the terminal to delete the identified at least one piece of content (Pecus, column 17, lines 15-28).

26. As to claims 14, 15, 21, 22, 31, and 32 they are rejected by a similar rationale to that set forth in claims 3 and 4's rejections.

27. As to claims 16, 23, and 33, they are rejected by a similar rationale to that set forth in claim 5's rejection.

Conclusion

28. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thomas J. Dailey whose telephone number is 571-270-1246. The examiner can normally be reached on Monday thru Friday; 9:00am - 5:00pm.

29. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Follansbee can be reached on 571-272-3964. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

30. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/T. J. D./
Examiner, Art Unit 2452

/Dohm Chankong/
Primary Examiner, Art Unit 2452